

## **Patent Abstracts of Japan**

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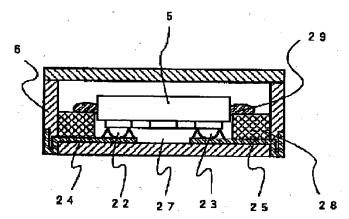
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TITLE

SURFACE MOUNTED PIEZOELECTRIC

PARTS



ABSTRACT :

PURPOSE: To have a small size, a thin type and high performance by forming very small clearance between the outer peripheral part and the end part of an SAW resonator, without staining the vibration proof electrode of a piezo-electric resonator, fixing a vibration proof part and stopping an oscillation by adhesive, and by further forming a surface mounted piezoelectric parts provided with shock resistance.

CONSTITUTION: After conductive parts 24 and 25 are provided at the internal bottom surface of a package 6, the end part of the stage 28 of insulating glass where a cavity which is higher than the heights of bumps 22 and 23 and is slightly larger than an SAW resonator 5 is made to form a very small clearance with the outer peripheral part of the resonator 5. Further, after the resonator 5 and the package 6 are connected, the resonator 5 and the stage 28 are fixed by epoxy system adhesives 29 applied to the outer peripheral part of the resonator 5. Because the clearance between this resonator 5 and the stage 28 is narrow, adhesive 29 does not intrude into the clearance 27 between the resonator 5 and the package 6 even if the adhesive is made into gel in a manufacturing process and the adhesive does not stain the IDT electrode of the resonator 5 or does not fix a vibration proof part. The adhesive forms a surface mounted piezoelectric parts provided with shock resistance.

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